Trough Mangle

Claims:

1. A trough mangle having preferably a mangle roll (10) that can be driven so as to revolve and a flexible mangle trough (12) associated with the mangle roll, wherein the mangle roll (10) has a diameter which is grater than 1600 mm.

2. The trough mangle as claimed in claim 1, wherein the mangle roll (12) has a diameter in the range from 1600 to 2600 mm.

3. The trough mangle as claimed in claim 1, wherein the mangle roll (12) has a diameter in the range from 1800 to 2400 mm.

4. The trough mangle as claimed in claim 1, wherein a drive side (33) of the mangle roll (10) is assigned a drive (32), and the drive (32) carries the mangle roll (10) on the drive side (33).

5. The trough mangle as claimed in claim 4, wherein the drive (32) of the mangle roll (10) is designed as an angled epicyclic gearbox (36).

6. The trough mangle as claimed in claim 1, wherein the mangle trough (12) is resilient and is formed of trough sections connected to one another.

7. The trough mangle as claimed in claim 1, wherein the mangle roll (10) has a wrapping which has a thickness between 6 and 25 mm.

8. A trough mangle having preferably a mangle roll (10) that can be driven so as to revolve and a flexible mangle trough (12) associated with the mangle roll (10), wherein a drive side (33) of the mangle roll (10)

is assigned a drive (32), and the drive (32) carries the mangle roll (10) on the drive side (33).

9. The trough mangle as claimed in claim 8, wherein the drive side (33) of the mangle roll (10) is mounted in the drive (32).

10. The trough mangle as claimed in claim 8, wherein a drive-side end wall (38) of the mangle roll (10) is assigned a coupling flange (39) which is connected to the end wall (38) and which has a torque-transmitting means for connecting the mangle roll (10) to the output drive shaft (35) of the drive (32).

11. The trough mangle as claimed in claim 10, wherein the torque-transmitting means of the coupling flange (39) has a splined profile, which is designed to correspond to a flanged profile on the output drive shaft (35) of the drive (32).

12. A trough mangle having at least one mangle roll (10) that can be driven so as to revolve and a flexible mangle trough (12) associated with the mangle roll (10), wherein a drive (32) of the mangle roll (10) has a gearbox which is designed as an epicyclic gearbox, an angled epicyclic gearbox (36), a cyclo gearbox or a harmonic drive gearbox.

13. The trough mangle as claimed in claim 12, wherein the epicyclic gearbox is designed as an angled epicyclic gearbox (36).

14. The trough mangle as claimed in claim 12, wherein the epicyclic gearbox is designed as a cyclo gearbox.

15. The trough mangle as claimed in claim 12, wherein the epicyclic gearbox is designed as a harmonic drive gearbox.

16. A trough mangle having at least one mangle roll (10) that can be driven so as to revolve and a flexible mangle trough (12) associated with the mangle roll (10), wherein, on the drive side (33) and on the non-driven side (34) opposite the latter, the mangle roll (10) is connected to a frame (15) such that it can pivot, in each case via a lever mechanism (30, 31).

17. The trough mangle as claimed in claim 16, wherein the lever mechanisms (30, 31) on the drive side (33) and the non-driven side (34) are coupled.

18. The trough mangle as claimed in claim 17, wherein the lever mechanisms (30, 31) are coupled by means of a compensating shaft (54), which is dimensioned such that it is substantially torsion-free.

19. The trough mangle as claimed in claim 18, wherein the compensating shaft (54) is associated with a pivot (44) of that lever (double lever 42, 48) of the lever mechanisms (30, 31) on which the mangle roll (10) is mounted.

20. The trough mangle as claimed in claim 17, wherein the weight of the drive (32) mounted on the lever mechanism (30) on the drive side (33) can be compensated for.

21. The trough mangle as claimed in claim 17, wherein the lever mechanisms (30, 31) on the drive side (33) and on the non-driven side (34) can be pivoted by means of pressure-medium cylinders.

22. The trough mangle as claimed in claim 21, wherein in order to compensate mechanically for the weight loading exerted by the drive (32) on the drive-side lever mechanism (30), the lever ratios of the lever mechanisms (30 and 31) are dimensioned such that that lever arm of the lever mechanism (30) on which a

pressure-medium cylinder acts in each case is shorter than the corresponding lever arm of the lever mechanism (31) of the non-driven side (34).

23. The trough mangle as claimed in claim 21, wherein in order to compensate pneumatically for the weight loading exerted by the drive (32) on the drive-side lever mechanism (30), the pressure-medium cylinder associated with this lever mechanism (30) has a smaller piston area than that pressure-medium cylinder which is associated with the lever drive (31) of the non-driven side (34) of the mangle roll (10).

24. A trough mangle having in particular a mangle roll (10) that can be driven so as to revolve and a flexible mangle trough (12) associated with the mangle roll (10), wherein the resilient mangle trough (12) is formed of trough sections connected to one another.

25. The trough mangle as claimed in claim 24, wherein the trough sections extend over part of the mangle trough (12) surrounding the mangle roll in some areas in the circumferential direction.

26. The trough mangle as claimed in claim 24, wherein the individual trough sections are designed independently, at least with regard to their energy supply.

27. The trough mangle as claimed in claim 24, wherein each trough section has its own connections, at least for the feed of energy.

28. The trough mangle as claimed in claim 27, wherein the connections of the individual trough sections are connected in parallel with one another in terms of flow.

29. The trough mangle as claimed in claim 24, wherein the trough mangle (12) has two substantially identically designed trough sections.

30. The trough mangle as claimed in claim 29, wherein each of the identically designed trough sections is formed from a trough half (21, 22).

31. The trough mangle as claimed in claim 30, wherein the trough halves (21, 22) are connected to each other by welding in the center of the mangle trough (12).

32. The trough mangle as claimed in claim 30, wherein the trough halves (21, 22) are connected to each other by a longitudinal welded seam (29) along a connecting line (23) going through in the longitudinal direction of the mangle trough (12), the connecting line (23) running in the longitudinal direction of the mangle trough (12), through the lower vertex of the same.

33. The mangle trough as claimed in claim 32, wherein the longitudinal welded seam (29) is formed and dimensioned in such a way that it has approximately the same section modulus as the respective trough halves (21, 22).

34. A trough mangle having in particular a mangle roll (10) that can be driven so as to revolve and a flexible mangle trough (12) associated with the mangle roll (10), wherein the mangle roll (10) has a wrapping which has a thickness between 6 and 25 mm.

35. The mangle trough as claimed in claim 34, wherein the wrapping of the mangle roll has a thickness of 12 to 30 mm.

36. The trough mangle as claimed in claim 34, wherein the wrapping is formed in one layer.

37. The trough mangle as claimed in claim 34, wherein the wrapping is closed endlessly in the circumferential direction of the mangle roll (10) by means of a connecting seam substantially without an offset.

38. The trough mangle as claimed in claim 34, wherein the wrapping is formed from a felt-like material.

39. The trough mangle as claimed in claim 38, wherein the wrapping is formed only from a felt-like material.